Community Advisory Council
March 12, 2026
Action Items/Notes

Final

Note: This was a hybrid meeting, held virtually through Zoom and in-person in the Science and User Support Center (SUSC) Room 121-122. A video recording of the Zoom meeting is available.

These notes are in the following order:

1. Attendance
2. Correspondence and handouts
3. Administrative items
4. Environmental Presentation
5. Scientific Presentation
6. Community Comment
7. Agenda Setting

1. Attendance

Members/Alternates Present: See attendance sheet at the end of the notes

Others Present: B. Barth, D. Bauer, D. Carlson, X. Chen, A. Emrick, A. Engel, S. Gonzalez, K. Green, A. Klein, S. Kohler, D. Manning, R. McKay, A. McGovern, J. Michaels, J. Milligian, A. Morocho, J. Mosho, D. Paquette, C. Polanish, V. Racaniello, A. Rapiejko, J. Remien, A. Sedlacek, M. Sweet, M. Trotta, A. Urist, J. Wanless, K. White, W. Yeung

2. Correspondence and Handouts

Items numbered one and two were e-mailed to Members on March 5, 2026. Item number three and four was e-mailed to Members on March 12, 2026.

1. Draft notes from the January 22, 2026 meeting
2. Copy of December 2004 and January 2005 minutes
3. Copy of presentations: Environmental Update and BNL Cloud Chamber: A Programmable Atmosphere for Environmental Research
4. Final agenda for the March 12, 2026 meeting

3. Administrative Items

The meeting was called to order at 6:33 p.m.

Everyone in the room and online introduced themselves. Ken White, Facilitator, reviewed the ground rules and agenda.

White stated that primary members should represent their organization at the CAC table. If a primary member is absent, an alternate may serve in their place for voting. When both are present, alternates should defer comments and input to the primary member.

Quorum was established.

Q- Member Esposito asked if an alternate member is attending the CAC virtually, how will they pass their questions/comments to the member at the table. Perhaps think about the alternate being able to ask questions.
A- White said we do accommodate those questions online. Jason Remien said we will answer any questions.

The January 2026 CAC Action Items and Notes were approved as written.

Amy Engel brought up that one of the action items, to find out when it was discussed with the CAC that VOC contamination cleanup in the Magothy Aquifer would go to 2065. The December 2004 and January 2005 minutes were pulled from offsite storage, and copies were sent to the CAC members via email. Printed copies of the minutes are also available.

Q- Member Schuhmann asked if the purpose of today's meeting was a continued response to the discussion that began in December.
A- Engel confirmed this and stated that there is now extra time built into the agenda for discussion.

Q- Schuhmann asked if the copies of the presentations could be sent out earlier to give more time to review.

David Manning announced that Doug Paquette and Robyn McKay will both be retiring the end of March.

Ann Emrick reported that John Hill and Martin Schoonen were unable to attend due to travel to Washington, DC. She also noted that on February 6, the Relativistic Heavy Ion Collider (RHIC) was shut down for the final time, having fulfilled its scientific mission, marking the official transition to the Electron-Ion Collider (EIC).

Under Secretary for Science Dario Gil attended the ceremony, and it was announced that CD-3B approval was granted for the EIC project—a key milestone allowing procurement of long-lead items. The Annual Lab Plan is currently in development. Lab leadership will present a 10-year plan to the Office of Science, including scientific priorities, campus strategy, infrastructure, and environmental liabilities and challenges. CAC members will be briefed on the Annual Lab Plan as agenda time permits.

Member Israel said the RHIC legacy will live on.

Q- Member Esposito said the President's budget will be out soon and asked if the CAC could be updated on how BNL fared once it goes through the house/senate.

4. Environmental Updates

Environmental Compliance Program – Jason Remien

Dashboard Update

Remien explained that a dashboard update will be included in every meeting moving forward. This slide will provide a snapshot of changes in status (if any) as they happen, rather than waiting for the annual Site Environmental Report.

Two columns, one for Environmental Program/Process and one for Performance (green, yellow, red). Rather than reviewing every item, each meeting will highlight select programs to provide updates on specific developments of interest.

Environmental Program Metrics
State Pollutant Discharge Elimination System (SPDES): since 2024 and to present we have not received any violations.

Spills: 5 spills, 1 reportable since the beginning of the calendar year. These were small, oil-based spills that were cleaned up right away.

Central Steam Facility Annual Air Emission: 2024 and 2025, our actual emissions are much lower than the annual limits allow. 2026 data will be available next month as we report quarterly to New York State DEC. We try to reduce our emissions as much as possible, using natural gas on site as our primary fuel does help.

New Aboveground Storage Tanks
Purchased (2) 10,000-gallon double walled fire-rated UL-2085 certified steel tanks to replace underground storage tanks for regular gasoline and E85 ethanol that we use for our fleet. The new tanks above ground will make it easier to see if there is an issue.

Q- Alex Klein (DEC) asked what the expected lifetime of these tanks.
A- Remien said he imagines 30 years.

Q- Member Esposito asked what the storage tanks are made of.
A- Remien said double walled, fire insulated steel.

Once the new tanks are installed, the underground storage tanks will be removed. NYS Department of Environmental Conservation (NYSDEC) will be on site for the removal and soil samples will be collected to confirm that there are no releases from those tanks.

Q- Member Williams asked if the Lab expects usage of E85 to go down.
A- Remien said it is hard to say, we still have a fleet of E85 vehicles.

Q- Member Schuhmann asked if you stop using E85, can you use regular gasoline.
A- Remien said he believes so.

Q- Member Freeman asks if the double walled tank is fire insulated?
A- Remien, yes, it is fire rated.

Natural Resource Management

Deer Management: target max population onsite is 80-250 deer; current population is estimated at 450-600. So far, one weekend of controlled culling resulted in 12 deer taken, with operations impacted by harsh weather conditions. Two additional weekends are planned for March and April. Meat samples will continue to be tested for Cs-137 prior to donation for consumption; to date, all tested meat has met criteria for donation.

Q- Member Esposito said she heard that 30% of the deer didn't make it this winter due to harsh weather. Could anything similar be happening at the Lab?
A- Remien said that is possible, we will likely see that over time as we find them in the woods.

Forest Management: 66 acres of forest has been mechanically thinned on the Northern portion of the site. The area is now ready for prescribed burns in April or May pending conditions. Funds have been identified to secure a contractor from New Jersey that will bring a team to help with the planned burn.

Q- Member Sapp asked if there will be a reduction in the Southern Pine Beetle also due to the cold spells.
A- Remien said that he has asked Kathy Schwager that and said it is probably not cold enough for that. She did say that the pine beetle will likely decline, they have really devastated the forest.

Q- Member Jordan-Sweet, asked about the wildfire school that was used in the past, and why we are using a firm from New Jersey?
A- Remien noted continued support for fire professionals through the academy, which provides training and certification to participants from across New York State. While the academy was available to conduct prescribed burns in October, that timing is less optimal; the most effective window is typically April through May. All the burns have been coordinated with the NYSDEC and the Pine Barrens, along with BNL Fire Rescue. The firm from New Jersey will allow the Lab to complete more work in a shorter timeframe at a modest fee.

Q- Member Jordan-Sweet asked about the Lab monitoring trees falling onto the road along the William Floyd.
A- Remien, yes we are. Emrick confirmed that we are in conversation with the Town of Brookhaven about this issue and that we are monitoring and trying to manage this. Remien mentioned that the company Asplundh has been on site to try to take down trees that are along the edge of the road and stressed that we are trying to raise awareness on the issue.

Assessments/Regulatory Inspections
Assessment: Quality Management Office conducted an assessment of the NEPA and Cultural Resources Program. Some opportunities for improvement were identified, but there were no issues with compliance found during the assessment.

Regulatory Inspection: Quarterly Sewage Treatment Plant Inspection was satisfactory (no corrective actions required, sample results within established limits).

Q- Member Esposito, is the quarterly inspection of the sewage treatment plant the same as SPDES?
A- Remien, yes, it is and noted that the county conducts inspections of the sewage treatment plant, the Lab's largest outfall for liquid effluent. While the county does not sample for all parameters required of the Lab, it analyzes its own set of parameters through its laboratory and reports the results back to the Lab for comparison and compliance tracking.

Environmental Management System (EMS) Program Change

EMS is a structured framework of processes and procedures that enables an organization to reduce its environmental impacts, ensure regulatory compliance and improve operational efficiency. The ISO 14001 standard provides the foundation for this framework, and BNL was the first DOE facility to achieve certification in 2001, maintaining it through 2025. Over this time, the Lab has developed a highly mature EMS integrated into daily operations through a continuous improvement model (plan-do-check-act).

In 2025, recent changes rescinded federal requirements for EMS and removed the contractual requirement for ISO 14001 certification, BNL will maintain its EMS program, but third-party certification has been removed from our contract.

The EMS program will continue unchanged in practice, with ongoing efforts to ensure compliance, engage the community, prevent environmental impacts, and identify efficiencies. External peer assessments will continue to provide independent oversight, and BNL remains committed to its environmental stewardship and core values.

Groundwater Protection Program – Brian Barth
Dashboard Key: Green: progress is being made, we're on track to meeting our goals. Yellow: concerns on attaining our goals. Gray: closed, goals have been met.

Dashboard – VOC Remediation System Status
Statuses provided are unchanged from January (yellow indicated for OUIII- Middle Road/South Boundary, OUIII – Airport and OU VI – EDB)

Dashboard – Radiological Remediation Status
All statues green. A distinction to note is that the radiological remediation status does not always reference an active 'system.' A significant portion of these projects rely on "monitored natural attenuation" to achieve the drinking water standard, which involves ongoing monitoring while natural processes, such as radioactive decay, dispersion, and diffusion reduces the contaminant levels over time. As a result, these efforts do not have defined timeframes.

Dashboard – PFAS Remediation System Status
Yellow indicated for OU X Current Firehouse. Barth explained that this change in status is due to a shift in the source area plume that is not being captured by existing extraction wells. Steps are being taken to address this issue (discussed during Groundwater Updates).

Groundwater Updates
OU VI ethylene dibromide system: back online after repairs to treatment system piping completed. The system went down in January because of pipe failure noticed during a carbon change out, the system was shut down for 6 weeks. This is not atypical; the systems need maintenance and can breakdown from time to time. It is built into the life cycle of the system. One thing to note is that contamination that might have been migrating through those extraction wells hadn't had an opportunity to migrate that far and can be pulled back once the wells come back online.

Middle Road/South Boundary and Current Firehouse/Bldg. 170: design plans and cost estimates for extraction wells are expected to be completed in April/May. This will allow us to be "shovel ready" when funding becomes available to start these projects.

Comprehensive Environmental Response Compensation and Liability Act (CERCLA) Five-Year Review: draft submittal to DOE in April. It evaluates each of our remedies and their protectiveness. As part of this a third-party contractor helps evaluate our systems and take advantage of new technologies that become available to help efficiency. It also included a decay evaluation for active components of the former facility on site, the High Flux Beam Reactor. To evaluate the time needed for safe decommissioning and dismantlement.

PFAS & 1,4-dioxane Monitoring: working with our regulators we are establishing a monitoring network utilizing 40 existing monitoring wells from representative locations on and off site that will establish a baseline prior to performing the remedial investigation.

Q- Member Esposito asked what the frequency of testing is at those 40 monitors?
A- Barth, twice a year.

Q- Member Esposito asked when will the monitoring begin for 1,4-dioxane?
A- Barth, 2nd quarter of the year, starting after March, and will be built into already scheduled sampling.

Q- How many people still have residential groundwater wells for water supply?
A- Barth, I don't know the number, we were down to three residencies that we still sample annually because they opted to stay on private supply wells. There might be more though.

Andy Rapiejko, stated that over the years there have been several outreaches in that neighborhood, but there may be two homes with three wells. Every year DOE and Brookhaven Lab offer testing from Suffolk County of those wells.

Q- Member Israel asked if they have found any methods for treating 1-4, dioxane?
A – Barth, there's one that's commercially available and viable, which is advanced oxidation process. It destroys the molecule, some with UV and hydrogen peroxide, ozone, and other methods. The Trojan System is the most widely used by water supplies on Long Island, which is a UV hydrogen peroxide system. There are pros and cons of these various systems.

Member Esposito added that the water suppliers have been using that effectively for 5-6 years now, but also Yale University has been developing new technologies on this.

Q- Member Freeman asked what the half-life of the PFAS that we have on site?
A- Barth responded that PFAS doesn't have a half-life, the term half-life typically applies to the decay of a radiological radioactive element. PFAS is known as the forever chemical because they don't break down in the environment. You would see concentrations decrease over time if you don't have a continuing source through dispersion and diffusion through the groundwater.

Building 526 Demolition

Demolition of this building is to make room for new facilities, as this facility hasn't been in use for many years. Before demolition begins, arrangements are being made to perform some sampling on the exterior for PFAS in the surface and subsurface soil, as well as beneath the building slabs in the basement for PFAS and radionuclides and some other chemicals.

The area east of the building is designated as Area of Concern (AOC) 17, associated with past nuclear research conducted from the 1950s to mid-1960s, including criticality experiments and a mock-up of the High Flux Beam Reactor (HFBR). This area was evaluated for radiological contamination, particularly cesium-137, through surveys and sampling. Results showed no contaminants above screening or background levels, and no further remediation was required. However, the area remains under land use institutional controls, meaning any future soil disturbance must go through review and approval to ensure it is safe. The building had a former foam fire suppression system related to research with flammable materials. Historical records indicate the system was tested regularly, with likely discharges to the southeast area of the building. Groundwater monitoring downgradient in that area has identified low levels of PFOS contamination.

As part of the planned demolition, a targeted remedial investigation will be conducted beforehand to collect soil data prior to any disturbance. While no excavation is currently planned, sampling will also be performed beneath the building slab to test for PFOS, radionuclides, metals, and other potential contaminants. This is a precautionary step, as the building itself was not previously included in Areas of Concern.

White asked for feedback regarding the new format for Environmental updates:

Member Schuhmann suggested highlighting key changes from larger reports, noting that lengthy documents—such as annual groundwater updates—can be difficult to digest, and that emphasizing what has changed would be most helpful. He supported the shift toward more frequent, smaller updates rather than one comprehensive annual presentation.

Remien emphasized that we are going to try to give a snapshot as we go, and when we give those annual reports, they will focus on highlights.

Discussion also included whether a “living document” could be developed to track updates, though Lab staff noted challenges with maintaining such a tool. Instead, they emphasized continued use of quarterly and annual reports, supplemented by more frequent updates during meetings.

Member Israel recommended using clear visual indicators, such as arrows or color changes, to show when conditions improve or decline (e.g., green to yellow or vice versa), to better highlight trends.

Member Karp added that having acronym list for reference in their folders would be helpful.

Member Sapp noted that breaking information into smaller, focused updates improves understanding, as large presentations can be overwhelming. There was also interest in providing additional background or orientation sessions to help newer members better engage in discussions.

5. **Scientific Presentation** BNL Cloud Chamber: A Programmable Atmosphere for Environmental Research – Arthur Sedlacek

BNL’s cloud chamber (*Nephos)*, a modular, temperature-controlled experimental system designed to study cloud formation, aerosol behavior, and atmospheric processes under controlled laboratory conditions.

Sedlacek explained that cloud formation requires three key elements: water vapor, cooling to saturation/supersaturation, and aerosol particles (cloud condensation nuclei).

The chamber allows researchers to replicate and sustain cloud-like conditions for extended periods, addressing challenges associated with field measurements (e.g., aircraft sampling limitations and lack of reproducibility).

The system is approximately one meter in size, with heated and cooled panels (including side panels) that allow researchers to control turbulence, airflow, and environmental conditions (“programmable atmosphere”).

It is one of only two convection cloud chambers in the United States (MTU and BNL).

There is a range of research applications, including:

- Understanding the aerosol–cloud–drizzle continuum and improving weather and climate models
- Studying ice formation and icing impacts on infrastructure, including power lines
- Evaluating energy grid resilience, including testing coatings to prevent ice buildup
- Investigating wildfire smoke transport and its effects on clouds, air quality, and solar energy efficiency
- Examining bioaerosols and pollen behavior under high humidity conditions
- Supporting free-space optical (laser-based) communications, including impacts of clouds and aerosols on signal transmission

Q – Alex Klein asked if we built the entire chamber on-site?
A – Sedlacek explained we built half on-site and the other half off-site

Q – Alex Klein asked how did we handle the condensation?
A – Sedlacek said we used laser etching to run the water down into the reservoir.

Q- Member Schuhmann asked how the chamber, which is driven by convection, compares to real clouds that are influenced by wind.
A- Sedlacek explained that convection also occurs in the atmosphere (warm air rising and cool air sinking) and that the chamber can replicate these dynamics. By controlling temperature differences across panels, the system can create shear and airflow patterns similar to real clouds, allowing it to closely mimic natural conditions.

Q- Member Sapp asked about progress on energy-related applications, particularly for weatherproofing transmission lines, compressors, etc.
A- Sedlacek noted that interest in these applications has increased significantly in recent months, aligned with DOE priorities on energy resilience and infrastructure reliability.

Q- Member Freeman asked whether sound waves have been tested for interaction with clouds
A- Sedlacek said this has been considered but not yet implemented.

Q- Member Jordan-Sweet commented on the limited number of such facilities in the U.S. and suggested collaboration with other facilities onsite. She also said they should collaborate with CFN.

A - Sedlacek emphasized that the chamber also serves as a platform for education, collaboration, and future research, including integration with modeling, advanced sensing technologies, and potential larger-scale facilities.

Q- Member Williams asked how the cloud chamber could be used to study wildfire smoke as it travels across the country.
A- Sedlacek explained that wildfire aerosols evolve over time and can impact air quality, human health, and energy systems (e.g., reducing solar panel efficiency). He noted that the chamber allows researchers to simulate these aerosols and study how their position relative to clouds can either enhance cloud formation or cause cloud dissipation, helping to better understand these complex processes.

6. Community Comment

No community comment.

7. Agenda Setting

- CAC Member tour scheduled for May 14 prior to the meeting (tentatively 4:30–6 pm). Details still coming together, the tour is expected to include Well #12 (water supply), a PFAS treatment facility, and the sewage treatment plant.
- Update on Annual Lab Plan
- AI Genesis, DOE initiative
- A follow-up to an update that was provided 2 years ago about our transition to a nuclear facility, conforming to DOE regulations due to our medical isotope research.
- Budget, if available
- Solar energy and recycling program

Meeting adjourned at 8:52 pm
Next meeting: April 9, 2026

X = Present 2026 Affiliation		First Name	Last Name	Jan	Feb No mtg	Mar	Apr	May	June No mtg	July No mtg	Aug No mtg	Sep	Oct	Nov	Dec No mtg
ABCO – Civic	Member	Ray	Keenan	X		X									
	Alternate	Michael	Madigan												
Brookhaven Coalition of Chambers of Commerce – Business & Labor	Member	Ron	Trotta												
	Alternate	Carmine	Inserra												
Brookhaven Retired Employees Association- BNL Affiliation	Member	Mark	Israel	X		X									
	Alternate	Eena-Mai	Franz												
	Alternate	Arnold	Moodenbaugh												
Brookhaven Village Association – Civic	Member	Reinhardt	Schuhmann	X		X									
	Alternate	Chris	Ciervo												
Citizens Campaign for the Environment – Advocacy & Environment	Member	Adrienne	Esposito	X		X									
	Alternate	Christina	Lizzo	X		X									
Cornell Cooperative Extension – Health based	Member	Chris	Pickerell												
	Alternate	Lorne	Brousseau												
Country Pointe Meadows – Civic	Member	Jeff	Williams	X		X									
	Alternate														
East Yaphank Civic Association - Civic	Member	Robert	Feinman												
	Alternate	Laura	Reid												
Emeritus	Member	David	Sprintzen												
FOREST - Advocacy & Environment	Member	Tim	Green	X		X									
	Alternate														
Foundation for Economic Education – Education, Science & Technology	Member	Craig	Pratka	X		X									
	Alternate	Christian	Price	X		X									
Individual	Member	James	Freeman	X		X									
Individual	Member	Jane	Corrarino												
Individual	Member	Karen	Blumer	X											
	Alternate	Michael	Madigan	X											
L.I. Pine Barrens Society – Advocacy & Environment	Member	Nina	Leonhardt												

	Alternate	Travis	Cutter	X		X										
Longwood Central School Dist. – Education, Science & Technology	Member	James	Crenshaw													
	Alternate															
Middle Island Civic Association – Civic	Member	Martin	Filler	X		X										
	Alternate	Margaret	Malloy													
National Grid – Business & Labor	Member	Brian	Sapp	X		X										
	Alternate															
New York League of Conservation Voters – Advocacy & Environment	Member	Casey	Petrashek													
	Alternate	Joseph	Stallone	X		X										
NSLS-II User Committee – BNL Affiliation	Member	Jean	Jordan-Sweet	X		X										
	Alternate	Matthew	Whitaker													
Ridge Civic Association – Civic	Member	Scott	Wood													
	Alternate	Barbara	Royce													
Stony Brook Hospital – Health based	Member	Erika	Karp	X		X										
	Alternate	Kristin	Cuomo													
Suffolk County Legislature 1st Dist. – Government	Member															
	Alternate															
Teachers Federal Credit Union – Business & Labor	Member	Jashmin	Futch			X										
	Alternate	Kathleen	Misiano													
Town of Brookhaven – Government	Member	Karen	Dunne Kesnig													
	Alternate 1	Patricia	Kaloski	X												
	Alternate 2	Julia	Norris	X												
Town of Riverhead - Government	Member	Robert	Kern			X										
	Alternate	Frank	Mancini													
Wading River Civic Association - Civic	Member	Henry	Perez	X		X										
	Alternate	Linda	Rundlett													